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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/067,544 04/27/98 BOUCHER L ALA-002

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EXAMINER

MAUNG, Z

ART UNIT

PAPER NUMBER

2758

DATE MAILED:

06/05/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/067,544

Applicant(s)

Boucher et al.

Examiner

Zarni Maung

Group Art Unit

2758



☒ Responsive to communication(s) filed on Apr 27, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1035 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1-53 is/are pending in the application.

Of the above, claim(s) 7-28 and 35-53 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-6 and 29-34 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☒ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4, 8, 10

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

15. Claims 1-53 are presented for examination.

16. Restriction to one of the following inventions is required under 35 U.S.C. 121:

Group a Claims 1-6, and 29-34 are drawn to a method for choosing whether to process packet by protocol layers based on summary, classified in Class 709, subclass 250.

Group b Claims 7-12 and 18-22 are drawn to a method for processing headers without copying data, classified in Class 709, subclass 236.

Group c Claims 13-17 are drawn to a method for sending a plurality of data portions to a destination without associated headers and without generating an interrupt to any host CPU, classified in Class 709, subclass 246.

Group d Claims 23-28 and 46 are drawn to a method and system for transferring message between network and a local host is generally processed by the device instead of by the protocol stack, classified in Class 709, subclass 238.

Group e Claims 35-39 are drawn to a method for providing a first and a second protocol stacks to CPU, classified in Class 709, subclass 230.

Group f Claims 40-47 are drawn to a method for prepending headers to data, classified in Class 709, subclass 231.

Group g Claims 48-50 and 51-53 are drawn to a microprocessor for comparing information summary with a connection context and moving packet without protocol

information to a destination, classified in Class 709, subclass 245.

The inventions are distinct, each from the other because of the following reasons:

Inventions are disclosed as different combinations which are not connected in design, operation or effect. These combinations are independent if it can be shown that (1) they are not disclosed as capable of use together, (2) they have different modes of operation, (3) they have different functions, or (4) they have different effects. (MPEP 806.04, MPEP 808.01). In the instant case, inventions are directed to have different functions and they have different effects.

20. These inventions are distinct for the reasons given above, and the search required for each Group is different and not co-extensive for examination purpose. For example, the searches for the inventions would not be co-extensive because these groups would require different searches on PTO's classification class and subclass as following:

(A) the Group a search (claims 1-6 and 29-34) would require use of search **Class 709, subclass 250**.

(B) the Group b search (claims 7-12 and 18-22) would require use of search **Class 709, subclasses 236**.

(C) the Group c search (claims 13-17) would require use of search **Class 709, subclasses 246**.

(D) the Group d search (claims 23-28 and 46) would require use of search **Class**

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709, subclasses 238.

(E) the Group e search (claims 35-39) would require use of search **Class 709, subclasses 230.**

(F) the Group f search (claims 40-47) would require use of search **Class 709, subclasses 231.**

(G) the Group g search (claims 48-50 and 51-53) would require use of search **Class 709, subclasses 245.**

17. During a telephone conversation with Mr. Mark Lauer on May 24, 2000, a provisional election was made without traverse to prosecute the claims in group (a) of claims 1-6 and 29-34. Affirmation of this election must be made by applicant in responding to this Office action. Claims 7-28 and 35-53 are withdrawn from further consideration by the Examiner, 37 C.F.R. § 1.142(b), as being drawn to a non-elected invention.

18. Applicant is advised that the response to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed.

19. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 C.F.R. § 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim

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remaining in the application. Any amendment of inventorship must be accompanied by a diligently-filed petition under 37 C.F.R. § 1.48(b) and by the fee required under 37 C.F.R. § 1.17(h).

20. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103, the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 C.F.R. § 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103.

21. Claims 1-6 and 29-34 are rejected under 35 U.S.C. § 103 as obvious over Bilansky et al., U.S. Patent Number 5,878,225 (hereinafter Bilansky), in view of Radogna et al., U.S. Patent Number 5,991,299 (hereinafter Radogna).

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22. Bilansky discloses a method for bypassing protocol layers (see abstract). Bilansky discloses the invention substantially as claimed. Taking claim 1 as an exemplary claim, Bilansky discloses a method for communication between a network and a host computer having a processor and a sequential stack of protocol layers (see figures 1-4, client 100, server 200 and protocol layers 110,130,150,170, 190), wherein the method comprising; receiving, by said host from said network, a message packet including data and a plurality of headers corresponding to said stack of protocol layers, said data intended for placement in a destination of said host according to protocol processing of said headers, processing said plurality of headers, including creating a group of headers, and choosing whether to process said packet by said protocol layer (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers).

23. Bilansky does not explicitly show the process of processing plurality of headers as a group and creating a summary of group of headers. However, Bilansky does show the processing of headers (see column 5, line 24 to column 6, line 66). Radogna discloses a method for processing messages in a communications network similar to that of Bilansky, wherein Radogna discloses the process of processing plurality of headers as a group and creating a summary of group of headers (see column 3, line 12 to column 4, line 50, RHP 46 for parsing headers). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Bilansky in view of Radogna by

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including the process of processing plurality of headers as a group and creating a summary of group of headers, because Bilansky suggests the processing of headers. One of ordinary skill in the art would have been motivated to modify and use the method disclosed by Bilansky since Bilansky suggests that bypassing the protocol stack can reduce the communication overhead (see column 10, lines 25-35).

24. As per claim 2, Bilansky teaches the method of claim 1, wherein said method further comprises the steps of sending said data to said destination according to said summary of said group without processing said headers by said protocol layers (see column 6, lines 18-45, bypassing communication service layers).

25. As per claim 3, Bilansky teaches the method of above claims, wherein said method further comprises the steps of wherein said processing of said group of headers occurs during said receiving, by said host from said network, of said message packet.

26. As per claim 4, Bilansky teaches the method of above claims, wherein said method further comprises creating a communication control block for a connection including said packet, and matching said communication control block, for sending said data to said destination (see column 5, line 5 to column 6, line 61).

27. As per claim 5, Bilansky teaches the method of above claims, wherein method of

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further comprises creating a communication control block for a connection including said packet, wherein sending said data to said destination includes guiding said data by said communication control block (see column 5, line 5 to column 6, line 61).

28. As per claim 6, Bilansky teaches the method of above claims wherein method of further comprises transmitting a second message packet from said host to said network by referencing said communication control block (see column 6, line 5 to column 8, line 63).

29. As per claim 29, Bilansky discloses a method for network communication by a host computer having a processor, a memory and a sequential stack of protocol layers (see figures 1-4), the method comprising:

receiving by the host from the network a packet including data and a plurality of headers relating to the stack of protocol layers, said data having a destination in said host, categorizing said packet with a hardware logic sequencer (see figures 1-4, client 100, server 200 and protocol layers 110,130,150,170, 190), including classifying said headers and choosing, based upon said summary, whether to send said packet to said stack of protocol layers or to bypass said stack of protocol layers by sending said data to said destination (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers).

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30. Bilansky does not explicitly show the process of processing plurality of headers as a group and creating a summary of group of headers. However, Bilansky does show the processing of headers (see column 5, line 24 to column 6, line 66). Radogna discloses a method for processing messages in a communications network similar to that of Bilansky, wherein Radogna discloses the process of processing plurality of headers as a group and creating a summary of group of headers (see column 3, line 12 to column 4, line 50, RHP 46 for parsing headers). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Bilansky in view of Radogna by including the process of processing plurality of headers as a group and creating a summary of group of headers, because Bilansky suggests the processing of headers. One of ordinary skill in the art would have been motivated to modify and use the method disclosed by Bilansky since Bilansky suggests that bypassing the protocol stack can reduce the communication overhead (see column 10, lines 25-35).

31. As per claim 30, Bilansky discloses a method for network communication by a host computer, wherein said packet is a part of a message having a plurality of packets, and further comprising: receiving by said host from said network a second packet of said message, said second packet including additional data and additional headers, categorizing said second packet with said hardware logic sequencer, including class said additional headers and creating a second packet summary, choosing, based upon said second packet summary, whether to send said second packet to said stack of protocol

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layers or to bypass said stack of protocol layers and send said additional data to said destination, whereby only one of said first and second packets is sent to said stack of protocol layers (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers).

32. As per claim 31, Bilansky discloses the method of claim 29, further comprising: sending said packet to said stack of protocol layers, processing said packet with said stack of protocol layers and thereby creating a context for said message receiving by said host from said network a related packet including additional data and additional headers, and employing said context for sending said related packet to said destination (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers, and slow path through the layers).

33. As per claim 32, Bilansky discloses method of claim 29, further comprising creating a context for a message including said packet said context defining a connection between said host and a remote host, wherein choosing whether to send said packet to said stack of protocol layers or to bypass said stack of protocol layers includes comparing said context (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, column 8, lines 47-65).

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34. As per claim 33, Bilansky discloses the method of claim 29, further comprising bypassing said stack of protocol layers by sending said data to said destination in a form suitable for said destination (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers, and slow path through the layers).

35. As per claim 34, Bilansky discloses the method of claim 29, further comprising sending said packet to said stack of protocol layers, processing said packet with said stack of protocol layers and thereby creating a context for said message, and employing said context for transmitting a reply to said -network from said application space, including prepending a transmission header to reply data, said transmission header including control information regarding each of said protocol layers (see abstract, column 2, lines 25-50, column 3, line 65 to column 4, line 6, column 4, lines 40-67, column 6, lines 5-45, DDM fast-path bypasses the communication service layers, and slow path through the layers; see column 8, lines 5-65).

36. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(a) System and method for concatenating discontinuous memory pages by Mendelson et al., U.S. Patent Number 5,930,830.

(b) Custom circuitry for adaptive hardware routing engine by Hitzelberger, U.S.

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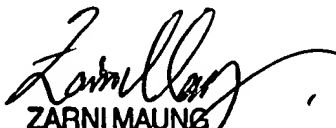
Patent Number 6,061,368.

37. a shortened statutory period for response to this action is set to expire **3 (three) months and 0 (zero) days** from the mail date of this letter. Failure to respond within the period for response will result in **ABANDONMENT** of the applicant (see 35 U.S.C 133, M.P.E.P 710.02, 710.02(b)).

38. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zarni Maung whose telephone number is (703) 308-6687.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

May 30, 2000


ZARNI MAUNG
PRIMARY EXAMINER